WEST Search History

DATE: Monday, March 03, 2003

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR		
L33	l31 same protocol	5	L33
L32	L31 same (peripheral or i/o or input/output)	17	L32
L31	((automatic$7 or dynamic$7) near3 sequen$7 near3 address$5)	266	L31
L30	l8 same L29	2	L30
L29	l9 near3 device	43	L29
L28	l9 same l24	1	L28
L27	l24 and L25	6	L27
L26	l24 same L25	0	L26
L25	(setting adj2 protocol)	271	L25
L24	(operating adj2 protocol)	1101	L24
L23	l5 and l20	44	L23
L22	l10 same l20	0	L22
L21	L20 and l10	5	L21
L20	(first near2 protocol) same (second near2 protocol)	1817	L20
L19	l9 near5 different	20	L19
L18	l8 with l9	45	L18
L17	l5 and l9	33	L17
L16	l5 and l9.ab.	0	L16
L15	l5 and l8.ab.	16	L15
L14	l5 and l8	189	L14
L13	l5 and l10	0	L13
L12	l10 same different	1	L12
L11	L10.ab.	9	L11
L10	l8 same L9	61	L10
L9	(configuration adj2 protocol)	1029	L9
L8	(communication adj2 protocol)	21086	L8
L7	l1.ab.	11	L7
L6	l1 and L5	10	L6
L5	l2 or l3 or L4	1067	L5
L4	(((710/11)!.CCLS.))	194	L4
L3	(((710/10)!.CCLS.))	419	L3
L2	((710/8)!.CCLS.)	643	L2
L1	((configur$5 or enabl$5) near2 (peripheral or i/o or input/output)) near7 protocol	75	L1

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L33: Entry 2 of 5 File: USPT Jun 26, 2001

DOCUMENT-IDENTIFIER: US 6253247 B1
TITLE: System and method for transmitting a user's data packets concurrently over different telephone lines between two computer networks

Abstract Text (1):
Methods and systems are provided for transmitting a user's data between two computer networks over physically separate telephone line connections which are allocated exclusively to the user. The user's data is placed in data packets, which are multiplexed onto the separate connections and sent concurrently to a demultiplexer. The data packets contain a computer network address such as an Internet protocol address. A dynamic address and sequence table allows the demultiplexer operation to restore the original order of the data after receiving the packets. The set of connections constitutes a virtual "fat pipe" connection through which the user's data is transmitted more rapidly. Additional users may be given their own dedicated "fat pipe" connections.

L33: Entry 1 of 5 File: USPT Apr 2, 2002

DOCUMENT-IDENTIFIER: US 6366962 B1
TITLE: Method and apparatus for a buddy list

Brief Summary Text (6):
On the Internet, the connection address of a user is typically the user's Internet Protocol (IP) address. The IP address, typically a digital sequence of numbers, is assigned dynamically each time a user goes online (i.e., each time the user creates a logical connection to the network). Buddy lists provide a way to associate a user-friendly name with a dynamically-assigned IP address.

L32: Entry 12 of 17 File: USPT Apr 20, 1993

DOCUMENT-IDENTIFIER: US 5204669 A
TITLE: Automatic station identification where function modules automatically initialize

Detailed Description Text (16):
FIG. 3-10 show structure and logic flow of a possible configuration for an automatic station identification system 10. These diagrams are for an embodiment of the invention which includes a programmable controller 12 comprising a controller such as a host computer which includes a bus interface board for interfacing with the serial data bus 22, control lines 16, 18, and programmable function modules 16. It will be readily apparent to those skilled in the art that there may be many different embodiments for the programmable controller such as a programmable board in a computer or a function module dedicated to the task of managing the automatic station identification sequence. Further, the invention could comprise a computer and its peripherals or a personal computer and its add-in cards. The automatic station identification requires a two-phase operation; a dynamic addressing sequence followed by a configuration sequence.

L32: Entry 4 of 17 File: USPT Aug 21, 2001

DOCUMENT-IDENTIFIER: US 6279051 B1
TITLE: Host adapter having paged payload buffers for simultaneously transferring data between a computer bus and a peripheral bus

Brief Summary Text (27):
In the above-described embodiment, the receive frame control drives a second write control signal (hereinafter "context switch" signal) active on the write control bus if the context of the next message is different from the context of the previous message. In response to the active context switch signal, the receive payload buffer and manager stores the active signal in a second status storage element (hereinafter "end-of-context" flag), and stores an inactive signal in the end-of-payload flag. Therefore, in the above-described example, if each message is smaller than a page, and four messages have been received from the same peripheral device, and the next message is from a different peripheral device, then the end-of-context flag is set for the fourth page, and all four pages have the end-of-payload flag clear. Thereafter, the receive payload buffer and manager uses the end-of-context flag at the time of updating the read pointer to drive a read control signal (hereinafter "context done" signal) active to indicate that the signals on the read data bus contain the last data of a context. The context done signal allows multiple pages of data from different contexts to be transmitted in a continuous manner, because a bus interface module (hereinafter "host interface module") that receives the signals from the read data bus and passes the signals to the computer bus causes another module (hereinafter "sequencer module") to automatically change the destination address in response to the active context done signal.

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L11: Entry 1 of 9 File: USPT Aug 8, 2000

DOCUMENT-IDENTIFIER: US 6101543 A
TITLE: Pseudo network adapter for frame capture, encapsulation and encryption

Abstract Text (1):
A new pseudo network adapter is disclosed providing an interface for capturing packets from a local communications protocol stack for transmission on the virtual private network. The system further includes a Dynamic Host Configuration Protocol (DHCP) server emulator, and an Address Resolution Protocol (ARP) server emulator. The new system indicates to the local communications protocol stack that nodes on a remote private network are reachable through a gateway that is in turn reachable through the pseudo network adapter. The new pseudo network adapter includes a transmit path for processing data packets from the local communications protocol stack for transmission through the pseudo network adapter. The transmit path includes an encryption engine for encrypting the data packets and an encapsulation engine for encapsulating the encrypted data packets into tunnel data frames. The pseudo network adapter passes the tunnel data frames back to the local communications protocol stack for transmission to a physical network adapter on a remote server node. The new pseudo network adapter further includes an interface into a transport layer of the-local communications protocol stack for capturing received data packets from the remote server node, and a receive path for processing received data packets captured from the transport layer of the local communications protocol stack. The receive path includes a decapsulation engine, and a decryption engine, and passes the decrypted, decapsulated data packets back to the local communications protocol stack for delivery to a user.

L18: Entry 2 of 45 File: USPT Nov 13, 2001

DOCUMENT-IDENTIFIER: US 6317701 B1
TITLE: Field device management system

Brief Summary Text (7):
Plant operators use so-called control room applications when running the plant by actual process control automation systems. Because the operator monitors the process day by day, he could start a maintenance step of a predetermined field device in time, if he were informed of the condition of said field device. A problem is to bring an information on a failure in a field device to the knowledge of the operator or maintenance person of the plant, because automation systems do not support digital field communication protocols, such as HART. A reason for this is that they are primarily regarded as configuration protocols of a field device or the communication protocol does not support a transmission of operating status data of the field device. The diagnostics of the field device is clearly an area belonging to the field device supplier and not to the supplier of the actual automation system. The present control room applications show only the data required for operating the process, and the operator has to check the status of the field devices relating to said process in a separate field management software. To use a separate field device management software in the control room is problematic for the operator, because there is no connection between the field devices displayed by the software and the process to be monitored. This leads to the fact that the operator primarily monitors the process and does not react to the condition of the field device until it causes interference with the process.

L21: Entry 1 of 5 File: USPT Jul 10, 2001

DOCUMENT-IDENTIFIER: US 6259706 B1
TITLE: Communication controlling apparatus and recording medium for recording communication controlling programs

Abstract Text (1):
A communication controlling apparatus includes a receiving side communication protocol identifying means for determining a candidate communication protocol for a second apparatus. If an acknowledgment response is received from the second apparatus, a communication protocol is determined to be a candidate communication protocol for the second apparatus and, if no acknowledgment response is received, operations to convert a first signal into another signal conforming to another communication protocol supposed to be adopted by the second apparatus and to transmit the other signal to the second apparatus are repeated till an acknowledgment response to the other signal is received from the second apparatus. The apparatus also has a communication protocol converting means converting the first signal into another signal conforming to another communication protocol supposed to be adopted by the second apparatus, and a communication protocol conversion controlling means controlling the communication protocol converting means. If a first communication protocol is different from a protocol at the receiving side, a command is given to the communication protocol converting means to convert the first signal into another signal conforming to the communication protocol identified by the protocol identifying means at the receiving side.

Brief Summary Text (13):
In accordance with an aspect of the present invention, there is provided a communication controlling apparatus provided between a first apparatus on a transmitting side originally designed for transmitting a first signal in accordance with a first communication protocol to a second apparatus on a receiving side for receiving a second signal in accordance with a second communication protocol and the second apparatus, wherein an acknowledgment response to the second signal is returned to the first apparatus if the second signal is received normally, and used for converting the first signal into the second signal conforming to the second communication protocol, the communication controlling apparatus comprising: receiving side communication protocol identifying means for determining a candidate communication protocol for the second apparatus wherein, if an acknowledgment response to the second signal transmitted to the second apparatus is received from the second apparatus, a communication protocol used for the transmission of the second signal to the second apparatus is determined to be a candidate communication protocol for the second apparatus and, if no acknowledgment response to the second signal transmitted to the second apparatus is received from the second apparatus, on the other hand, operations to convert the first signal into another signal conforming to another communication protocol supposed to be adopted by the second apparatus and to transmit the other signal to the second apparatus in accordance with the other communication protocol are repeated till an acknowledgment response to the other signal is received from the second apparatus in which case the other communication protocol is determined to be a candidate communication protocol for the second apparatus; communication protocol converting means for converting the first signal into another signal conforming to another communication protocol supposed to be adopted by the second apparatus; and communication protocol conversion controlling means for controlling the communication protocol converting means wherein, if the first communication protocol is different from a communication protocol identified by the receiving side communication protocol identifying means, a command is given to the communication protocol converting means to convert the

first signal into another signal conforming to the communication protocol identified by the receiving side communication protocol identifying means and, if the first communication protocol matches a communication protocol identified by the receiving side communication protocol identifying means, on the other hand, the first signal is passed on to the second apparatus as it is.

Drawing Description Text (14):
FIG. 12 is a diagram showing the configuration of a communication protocol converting apparatus, that is, a communication controlling apparatus implemented by a fourth embodiment of the present invention.

Detailed Description Text (2):
FIG. 1 is a diagram showing the principle of the present invention. As shown in the figure, a communication controlling apparatus 6 is provided between a first apparatus 2 on a transmitting side originally designed for transmitting a first signal in accordance with a first communication protocol to a second apparatus 4 on a receiving side for receiving a second signal in accordance with a second communication protocol and the second apparatus 4 wherein an acknowledgment response to the second signal is returned to the first apparatus 2 if the second signal is received normally and is used for converting the first signal into the second signal conforming to the second communication protocol. The communication controlling apparatus 6 comprises:

Detailed Description Text (6):
In the configuration described above, if an acknowledgment response to the second signal transmitted to the second apparatus 4 is received from the second apparatus 4, the receiving side communication protocol identifying means 8 determines a communication protocol used for transmission of the second signal to the second apparatus 4 to be a candidate communication protocol for the second apparatus 4 and, if no acknowledgment response to the second signal transmitted to the second apparatus 4 is received from the second apparatus 4, on the other hand, the receiving side communication protocol identifying means 8 repeats operations to convert the first signal into another signal conforming to another communication protocol supposed to be adopted by the second apparatus 4 and to transmit the other signal to the second apparatus 4 in accordance with the other communication protocol till an acknowledgment response to the other signal is received from the second apparatus 4 in which case the other communication protocol is determined to be a candidate communication protocol for the second apparatus 4. If the first communication protocol is different from a communication protocol identified by the receiving side communication protocol identifying means 8, the communication protocol conversion controlling means 10 gives a command to the communication protocol converting means 12 to convert the first signal into another signal conforming to the communication protocol identified by the receiving side communication protocol identifying means 8 and, if the first communication protocol matches a communication protocol identified by the receiving side communication protocol identifying means 8, on the other hand, the first signal is passed on to the second apparatus 4 as it is. As a result, the second apparatus 4 can receive a signal in accordance with the second communication protocol, allowing communication to be established between the first apparatus 2 and the second apparatus 4.

Detailed Description Text (78):
As described above, according to the present invention, the communication protocol adopted by a second apparatus 4 on the receiving side is identified and the communication protocol is converted into that adopted by the second apparatus 4 prior to transmission of a signal by a first apparatus 2 on the transmitting side to the second apparatus 4. As a result, it is no longer necessary to modify the second apparatus 4 even if the communication protocol of the first apparatus 2 is changed because the communication protocol is converted into that adopted by the second apparatus 4 anyway, allowing a flexible communication network to be built at a reasonable cost.

CLAIMS:

1. A communication controlling apparatus provided between a first apparatus on a transmitting side originally designed for transmitting a first signal in accordance

with a first communication protocol to a second apparatus on a receiving side for receiving a second signal in accordance with a second communication protocol and said second apparatus, wherein an acknowledgment response to said second signal is returned to said first apparatus if said second signal is received normally, and used for converting said first signal into said second signal conforming to said second communication protocol, said communication controlling apparatus comprising:

receiving side communication protocol identifying means for determining a candidate communication protocol for said second apparatus wherein, if an acknowledgment response to said second signal transmitted to said second apparatus is received from said second apparatus, a communication protocol used for transmission of said second signal to said second apparatus is determined to be a candidate communication protocol for said second apparatus and, if no acknowledgment response to said second signal transmitted to said second apparatus is received from said second apparatus, on the other hand, operations to convert said first signal into another signal conforming to another communication protocol supposed to be adopted by said second apparatus and to transmit said another signal to said second apparatus in accordance with said another communication protocol are repeated till an acknowledgment response to said another signal is received from said second apparatus in which case said another communication protocol is determined to be a candidate communication protocol for said second apparatus;

communication protocol converting means for converting said first signal into said another signal conforming to said another communication protocol supposed to be adopted by said second apparatus; and

communication protocol conversion controlling means for controlling said communication protocol converting means wherein, if said first communication protocol is different from a communication protocol identified by said receiving side communication protocol identifing means, a command is given to said communication protocol converting means to convert said first signal into another signal conforming to said communication protocol identified by said receiving side communication protocol identifying means and, if said first communication protocol matches said communication protocol identified by said receiving side communication protocol identifying means, on the other hand, said first signal is passed on to said second apparatus as it is.

7. A communication controlling apparatus provided between a first apparatus on a transmitting side originally designed for transmitting a first signal in accordance with a first communication protocol to a second apparatus on a receiving side for receiving a second signal in accordance with a second communication protocol and said second apparatus, wherein an acknowledgment response to said second signal is returned to said first apparatus if said second signal is received normally, and used for converting said first signal into said second signal conforming to said second communication protocol, said communication controlling apparatus comprising:

receiving side communication protocol identifying means for determining a candidate communication protocol for said second apparatus by transmitting its own communication protocol identifying signal for identifying said communication protocol of said second apparatus to said second apparatus on its own initiative wherein, if an acknowledgment response to said communication protocol identifying signal transmitted to said second apparatus is received from said second apparatus, on the other hand, an operation to transmit another communication protocol identifying signal to said second apparatus is repeated till an acknowledgment response to said another communication protocol identifying signal is received from said second apparatus in which case said communication protocol used for transmission of said another communication protocol identifying signal to said second apparatus is determined to be a candidate communication protocol for said second apparatus;

communication protocol converting means for converting said first signal into said another signal conforming to said another communication protocol supposed to be adopted by said second apparatus; and

communication protocol conversion controlling means for controlling said

communication protocol converting means wherein, if said first communication protocol is different from a communication protocol identified by said receiving side communication protocol identifying means, a command is given to said communication protocol converting means to convert said first signal into another signal conforming to said communication protocol identified by said receiving side communication protocol identifying means and, if said first communication protocol matches said communication protocol identified by said receiving side communication protocol identifying means, on the other hand, said first signal is passed on to said second apparatus as it is.

13. A recording medium used for storing a communication controlling program for controlling communication between a first app on a transmitting side originally designed for transmitting a first signal in accordance with a first communication protocol to a second apparatus on a receiving side for receiving a second signal in accordance with a second communication protocol and said second apparatus, wherein an acknowledgment response to said second signal is returned to said first apparatus if said second signal is received normally, and used for converting said first signal into said second signal conforming to said second communication protocol, said communication controlling program executed by a processor for implementing functions of:

receiving side communication protocol identifying means for determining a candidate communication protocol for said second apparatus wherein, if an acknowledgment response to said second signal transmitted to said second apparatus is received from said second apparatus, a communication protocol used for transmission of said second signal to said second apparatus is determined to be a candidate communication protocol for said second apparatus and, if no acknowledgment response to said second signal transmitted to said second apparatus is received from said second apparatus, on the other hand, operations to convert said first signal into another signal conforming to another communication protocol supposed to be adopted by said second apparatus and to transmit said another signal to said second apparatus in accordance with said another communication protocol are repeated till an acknowledgment response to said another signal is received from said second apparatus in which case said other communication protocol is determined to be a candidate communication protocol for said second apparatus;

communication protocol converting means for converting said first signal into said another signal conforming to said another communication protocol supposed to be adopted by said second apparatus; and

communication protocol conversion controlling means for controlling said communication protocol converting means wherein, if said first communication protocol is different from a communication protocol identified by said receiving side communication protocol identifing means, a command is given to said communication protocol converting means to convert said first signal into another signal conforming to said communication protocol identified by said receiving side communication protocol identifying means and, if said first communication protocol matches said communication protocol identified by said receiving side communication protocol identifying means, on the other hand, said first signal is passed on to said second apparatus as it is.

14. A recording medium used for storing a communication controlling program for controlling communication between a first apparatus on a transmitting side originally designed for transmitting a first signal in accordance with a first communication protocol to a second apparatus on a receiving side for receiving a second signal in accordance with a second communication protocol and said second apparatus, wherein an acknowledgment response to said second signal is returned to said first apparatus if said second signal is received normally, and used for converting said first signal into said second signal conforming to said second communication protocol, said communication controlling program executed by a processor for implementing functions of:

receiving side communication protocol identifying means for determining a candidate communication protocol for said second apparatus by transmitting its own communication protocol identifying signal for identifying said communication

protocol of said second apparatus to said second apparatus on its own initiative wherein, if an acknowledgment response to said communication protocol identifying signal transmitted to said second apparatus is received from said second apparatus, a communication protocol used for transmission of said communication protocol identifying signal to said second apparatus is determined to be a candidate communication protocol for said second apparatus and, if no acknowledgment response to said communication protocol identifying signal transmitted to said second apparatus is received from said second apparatus, on the other hand, an operation to transmit another communication protocol identifying signal to said second apparatus is repeated till an acknowledgment response to said another communication protocol identifying signal is received from said second apparatus in which case said communication protocol used for transmission of said another communication protocol identifying signal to said second apparatus is determined to be a candidate communication protocol for said second apparatus;

communication protocol converting means for converting said first signal into said another signal conforming to said another communication protocol supposed to be adopted by said second apparatus; and

communication protocol conversion controlling means for controlling said communication protocol converting means wherein, if said first communication protocol is different from a communication protocol identified by said receiving side communication protocol identifying means, a command is given to said communication protocol converting means to convert said first signal into another signal conforming to said communication protocol identified by said receiving side communication protocol identifying means and, if said first communication protocol matches said communication protocol identified by said receiving side communication protocol identifying means, on the other hand, said first signal is passed on to said second apparatus as it is.

L27: Entry 2 of 6 File: USPT Jan 30, 2001

DOCUMENT-IDENTIFIER: US 6182225 B1
TITLE: Network data base control device and method thereof

Detailed Description Text (281):
When the user changes the operating protocol with [Set (S)]-[Select protocol (P)], the message shown in FIG. 17 is displayed advising the user to restart NetSpot if the device window is open in controller mode. When the device window (FIG. 43) is open in controller mode, the restart of NetSpot cannot be selected so after the user has closed all device windows (FIG. 43) in controller mode, protocol can again be selected or NetSpot must once again be started after quitting NetSpot.

Detailed Description Text (282):
When the user changes the operating protocol with [Set (S)]-[Select protocol (P)], if the device window (FIG. 43) is not open in controller mode, the message in FIG. 18 appears advising the user to restart NetSpot. Here, if the user selects the [Yes(Y)] button then NetSpot restarts. If the user selects the [No(N)] button then the display status returns to the device list window of FIG. 15.

Detailed Description Text (314):
[To Next] button: The user selects this button to close the current dialog box (1-3) (FIG. 24) after saving the information displayed in this dialog box (1-3) (FIG. 24) and setting the protocol information for the network interface board based on this information. The add new device dialog box (1-4) (See FIG. 26) is then displayed.

Detailed Description Text (320):
When the setting of protocol information in the add new device dialog box (1-3) (See FIG. 24) has ended, the add new device dialog box (1-4) of FIG. 26 is displayed. When the currently used network protocol is NetWare, this add new device dialog box (1-4) serves as a dialog box for the user to set protocol information on the NB-1 board connected to the new add devices displayed in the device list window (FIG. 15). In the case of the NB-1 board, when the user selects the [End] button, the network interface board automatically resets and the new settings are now valid.

Detailed Description Text (363):
[To Next] button: The user selects this button to close the current dialog box (2-3) (FIG. 24) after saving the information displayed in this dialog box (2-3) (FIG. 24) and setting the protocol information for the network interface board based on this information. The add new device dialog box (2-4) (See FIG. 26) is then displayed.

Detailed Description Text (369):
When the setting of protocol information in the add new device dialog box (2-3) (See FIG. 24) has ended, the add new device dialog box (2-4) of FIG. 26 is displayed. When the currently used network protocol is TCP/IP, this add new device dialog box (2-4) serves as a dialog box for the user to check protocol information set on the NB-1 board connected to the new add devices displayed in the device list window (FIG. 15). In the case of the NB-1 board, when the user selects the [End] button, the network interface board automatically resets and the new settings are now valid.

Detailed Description Text (878):
[Protocol info]: The user selects the setting information for display for the protocol. The user selects from among "NetWare (N)" "AppleTalk (A)" "SNMP (M)" or "TCP/IP (I)". NetSpot displays on a list at the right, setting information relating

to the protocol or statistical SNMP information selected by the user. A list of items relating to setting information for each protocol is given for the NetWare Set Sheet (FIG. 105), TCP/IP Set Sheet (FIG. 114) or AppleTalk Set Sheet (FIG. 120). A list of the following items is displayed relating to SNMP statistic information. "Total receive SNMP packet count" "Total transmit SNMP packet count" "SNMP packets receive count for unknown community names" "SNMP packet receive count for inapplicable access modes" "Valid Get-Request packet receive count" "Valid Get-Next packet receive count" "Valid Set-Request packet receive count" "Valid generated trap packet count".

Detailed Description Text (892):
When the NetWare frame type is changed and the network interface board is reset while NetSpot is operating NetWare protocol, accessing the device may prove impossible. In an environment where the NetWare service cannot be used, the user must set "None" in the NetWare print service setting.

Detailed Description Text (918):
When the user changes the settings for [Frame type (F) in the NetWare Set Sheet (FIG. 105) and protocol settings for the network interface board have been completed; in cases where a soft reset of the network interface board was selected and NetSpot is operating the NetWare protocol, the message in FIG. 113 appears just before the soft reset of the network interface board. When the user selects the [Yes (Y)] button in the dialog of FIG. 113, the device window (FIG. 43) closes after performing soft reset of the network interface board. When the user selects the [No (N)] button, the device window (FIG. 43) does not close after performing soft reset of the network interface board.

Detailed Description Text (921):
When the user. changes TCP/IP frame type and IP address settings while the NetSpot is operating the TCP/IP protocol, and the network interface board is reset, access to the device may prove impossible.

Detailed Description Text (941):
On the TCP/IP Set Sheet (FIG. 114), when changes have been in made to the [Frame type (F)] or [IP address set method] or [IP address (P)] or [Subnet mask (M)] or the [Gateway address (G)] settings by the user and the protocol settings on the network interface board completed, once the soft reset of the network interface board is selected, the message in FIG. 119 is displayed just prior to the soft reset of the network interface board during TCP/IP operation by NetSpot. When the user selects the [Yes (Y)] button in the dialog of FIG. 119, after soft reset of the network interface board is performed, the device window (FIG. 43) closes. When the user selects the [No (N)] button, the device window (FIG. 43) does not close after soft reset of the network interface board is performed.

L27: Entry 5 of 6 File: USPT Aug 8, 1995

DOCUMENT-IDENTIFIER: US 5440547 A
TITLE: Data-transfer routing management for packet-oriented digital communication system including ATM networks

Detailed Description Text (96):
The routing table-set completion message from the RT server 258 to the VPI server 252 is sent upon the receipt of the table-set completion messages from all the switch nodes. A protocol for confirming these settings can be a protocol for guaranteeing the reliability such as a time-out. In addition, if the set completion cannot be confirmed after several trials, this is notified to the VPI server 252.

Detailed Description Text (98):
The VPI server 252 transfers the address information of the switch, i.e., the address information of its own cell exchange node and each port address information to the RT server using the broadcast channel. In addition, the RT server 258 operates the routing protocol to designate a route between arbitrary ports using the broadcast channel. The network configuration information can be acquired such that it is set by a network manager in advance or by operating a network protocol such as a routing protocol. By the above procedures (protocol), upon the receipt of the VPI-set request from the VPI server, the RT server sets a table for transferring cells to the VPI server in each cell exchange node, thereby assuring the route to the VPI server.

Detailed Description Text (110):
A subsequent routing table-set completion message from each RT server to the VPI server is sent upon the receipt of the table-set completion messages of all the cell exchange nodes. A protocol for confirming these settings is, for example, a protocol for guaranteeing reliability such as a time-out. Even if the set completion is not confirmed after several trials, this is notified to the VPI server.

Detailed Description Text (126):
The routing table-set completion message from the RT server to the VPI server is sent upon the receipt of the table-set completion messages of all the cell exchange nodes in the same manner as described above. A protocol for confirming these settings can be a protocol for guaranteeing reliability such as a time-out. When the set completion is not confirmed after several trials, this is notified to the VPI server. The assigned VPI is notified using the broadcast channel, the remaining VPI servers can recognize the VPI of the booted VPI server.